

REMARKS

Favorable reconsideration of this application and the Office Action of June 27, 2005 are respectfully requested in view of the foregoing amendments and the following remarks.

Claims 1-4, 7-18 and 21-31 appear and remain under consideration in this application as amended. Claims 5, 6, 19 and 20 have been cancelled by this response. The subject matter limitation of claims 6 and 20 has been incorporated into independent claims 1 and 15, respectively. Claims 25 and 26 have been similarly amended. Additionally, the optional ingredient water is now recited as a definite component. Additionally, the claims now have the blowing agent composition defined by the "consisting essentially of" language. New claims 27 to 31 have been added. Support in the specification for claims 27-30 is found at pages 5, 6 and 9 of the specification, and support for claim 31 is found in original claim 5 and at pages 4 and 5 of the specification.

The rejection of claims 1-8, 10, 12, 13, 15-21 and 13-26 under 35 U.S.C. 102 (b) as anticipated by the disclosure in Richard et al. (US 5, 162, 381) is respectfully traversed. It is respectfully submitted that this patent discloses no compositions or methods within the scope of the claims of this application.

With respect to blowing agent composition claims 1-4 and 7-14 there is no disclosure in Richard et al. of a blowing agent composition that contains an acid. Acids are only disclosed in this patent as additional nucleating agents. Additionally, this patent discloses no blowing agent compositions that contain 1,1,1,3,3-pentafluoropropane and water along with an acid.

With respect to the method claims 15-18 and 21-24 of the present application the disclosure in the Richard et al. patent is directed to producing polyolefin foams not the polyurethane or polyisocyanurate foams of the claims of this application. Similarly, the disclosure in Richard et al does not disclose a polyurethane or polyisocyanurate foam that is the subject of claims 25, rather it only discloses polyolefin foams. Likewise, since the disclosure in Richard et al. is to polyolefin foam production there is no disclosure of a premix of a polyol and any blowing agent, let alone one of a polyol and a blowing agent of 1,1,1,3,3-pentafluoropropane, an acid and water.

Thus, the disclosure in the Richard et al. patent fails to anticipate the subject matter of any claims of this application and the USPTO is respectfully requested to reconsider and withdraw this Section 102(b) rejection of the claims over Richard et al.

The rejection of all the claims under 35 U.S.C. 102(b) as anticipated by the disclosure in Hickey et al. (US 6,355,022 B1) is respectfully traversed. The disclosure in Hickey et al. does not anticipate any of the blowing agent compositions, method of forming polyurethane or polyisocyanurate foam with such blowing agent compositions or such resulting foams, or a premix of a polyol with such a blowing agent composition.

The disclosure in Hickey et al. is to a blowing agent composition that **must contain a hydrocarbon as the primary blowing agent component**, which component are **not included in the present claims** of this application wherein the blowing agent composition **consists essentially of** 1,1,1,3,3-pentafluoropropane, an acid and water. Thus, the disclosure in Hickey et al. neither does not anticipate, nor would it render obvious, the subject matter of the claims of the present application which exclude the presence of a hydrocarbon in the blowing agent composition. Therefore, the USPTO

is respectfully requested to reconsider and withdraw the Section 102(b) rejection of the claims of this application over the disclosure in Hickey et al.

The rejection of all the claims of this application as anticipated under 35 U.S.C. 102(b) by the disclosure in Tucker (US 5,883,146) is respectfully traversed. It is respectfully submitted that there is no disclosure of subject matter in the Tucker patent that would anticipate the claimed subject matter of this application.

The invention in Tucker is a method and composition for forming a closed cell polyisocyanate based foam by use of a **froth** foaming mixture. The disclosure therein is specific to such a froth forming process. Such a process is a specific type of foaming process as disclosed at column 3, lines 18-30 of the Tucker patent. In such a process the blowing agent(s) must be selected so as to create this froth when it exits the dispensing unit, i.e., like the shaving cream coming out of a can. Normally this means the blowing agent composition must be a material that is gaseous at room temperature or that reacts instantaneously to generate a gas when it is dispensed. This is in contrast to other polyurethane foam forming processes wherein a liquid is dispensed for forming foams such as pour-in-place, spray, block and boardstock foams. Thus, the blowing agent in Tucker is formulated to meet the specific requirements of such froth foaming process. For that reason, Tucker must employ certain hydrofluorocarbons having a specific boiling point requirement. At column 9, lines 44-58, Tucker specifies the hydrofluorocarbons that are acceptable for use in his froth foaming process. It is to be noted that the disclosure does not include 1,1,1,3,3-pentafluoropropane that is required by the claims of the present application. In fact, the preferred hydrofluorocarbon of Tucker is 1,1,2,2-tetrafluoroethane (R-134a) since it has a boiling point of 247K (-26°C at 760 mm/Hg) and readily vaporizes at atmospheric pressure—see col.9, lines 59-66.

This disclosure in Tucker does not anticipate the subject matter of the claims of the present application wherein the blowing agent composition consists essentially of 1,1,1,3,3-pentafluoropropane, acid and water since Tucker neither discloses nor teaches a blowing agent composition with 1,1,1,3,3-pentafluoropropane. The blowing agent compositions of the present invention are to be dispensed as a liquid for non-froth foaming processes and thus do not have the requirements that the Tucker patent requires.

It is submitted that technology developed by Tucker for froth foaming technology would provide no motivation or teaching to one skilled in this art to arrive at the invention of the present applicant wherein the specific combination of 1,1,1,3,3-pentafluoropropane, an acid and water as a blowing agent composition for use in liquid dispensing foaming processes leads to rigid polyurethane or polyisocyanurate foam with improved physical properties of insulation property, dimensional stability and compressive strength (as demonstrated by the data in Table 3 of the present application). Thus, the disclosure in Tucker does not anticipate, nor would it render obvious, the subject matter of the claims of the present application. Therefore, the USPTO is respectfully requested to reconsider and withdraw the rejection of the claims of this application under section 102(b) over the Tucker patent.

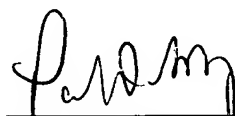
Newly presented claims 27 to 31 are also novel and unobvious and, therefore, patentable over the cited references. The disclosure in the Tucker et al. patent is limited to compositions containing formic acid and does not and would not teach blowing agent compositions with any other acids such as those of claims 27 to 31. The disclosure in the Hickey et al. patent requires a hydrocarbon blowing agent as the primary blowing agent component, which hydrocarbons are excluded from the compositions of claims 27-31 by the "consisting essentially of" language of those claims. The blowing agent composition disclosed in the Richards et al. patent has no acids present in the composition. Furthermore, nothing in any of these reference disclosure

teaches one skilled in the art that these claimed blowing agent compositions produce polyurethane and polyisocyanurate foams with the improved dimensional stability and compressive strength as does the blowing agent compositions of this invention.

It is respectfully submitted that the foregoing is a full and complete response to the Office Action and that all the claims are allowable for at least the reasons indicated. An early indication of their allowability by issuance of a Notice of Allowance is earnestly solicited.

Respectfully submitted,

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